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## WHAT DOES THE BRITISH PUBLIC THINK ABOUT HUMAN-ANIMAL HYBRID EMBRYOS?

### *Summary*

*In the recent UK debate on the Human Fertilisation and Embryology Bill there have been conflicting claims about the extent of public support for, or opposition to, human-animal hybrids. Self-selecting polls tend to show opposition to hybrids. Representative sample polling shows spontaneous opposition but can elicit conditional approval of research combined with underlying unease. Public opinion is very finely divided with people generally opposed to this research unless it is likely to lead to medical advances.*

Hybrid or ‘human admixed’ embryo is a broad category, including everything from less than 0.1% nonhuman up to 50% nonhuman. A ‘cytoplasmic hybrid’ embryo, made by replacing the nucleus of an animal egg with the nucleus from a human cell, is less than 0.1% nonhuman. A ‘true hybrid’ embryo, made by mixing gametes of different species, is approximately 50% nonhuman.

On 19 May 2008 the House of Commons voted for the legalisation both of ‘human admixed’ embryos (by 336 to 176) and specifically of ‘true hybrids’ (by 286 to 223). The majority of MPs were clearly in favour of this research, but does this approval reflect the opinion of the British public? In the debate in Parliament, Edward Leigh MP stated that ‘67 per cent oppose the measure’,<sup>[1]</sup> whereas later that week the philosopher Julian Baggini wrote that, ‘opinion polls repeatedly show that most members of the public do approve of embryo research, interspecies or otherwise.’<sup>[2]</sup> Faced with such contradictory claims, what can be said with confidence about the attitude of the British public to creating human-animal hybrids?

In March 2007 the Parliamentary Science and Technology Committee (STC) stated that ‘We have seen no conclusive evidence to indicate the true state of public opinion on the creation of animal-human chimera and hybrid embryos for research purposes... **We find it unhelpful that witnesses on both sides of the argument have claimed to represent the public view, where supporting evidence for this is lacking.**’<sup>[3]</sup> Of course, the fact that the public supports or opposes something is not enough, on its own, to settle the ethical or political question. The public can be misinformed or prejudiced. Nevertheless, in the words of the Joint Committee on the Human Tissue and Embryos (Draft) Bill (JCHTE), ‘legislation in an area such as this needs a sufficient level of support from the public and this requires a corresponding understanding of public attitudes’.<sup>[4]</sup>

### **Strength of opinion in self-selecting polls**

In this light it is interesting to note that in an online poll conducted on the *British Medical Journal* (BMJ) website after the Parliamentary debate, a majority of readers thought that MPs were wrong to allow the creation of human-animal hybrid embryos. Online polls are notoriously unreliable tests of opinion, for they are unrepresentative twice over: in the first place the group who come across the poll is nonrandom; but more importantly those who respond to the poll will be those that have strong views one way or the other. The

great majority will not express any opinion. Nevertheless, online polls and other forms of self-selecting polling (open invitations for submissions, letters to newspapers, letters to MPs etc.) do give some indication of relative strength of feeling on an issue, even if not of precise numbers.

Such self-selecting polls consistently show more opposition to creating hybrids than support. Taking these chronologically the percentage supporting the creation of human-animal hybrid embryos for research is as follows: 52% against 11% for (Department of Health);[5] 79% against 19 % for (BBC);[6] 90% against 2% for (JCHTE);[7] 71% against 12% for (Human Fertilisation and Embryology Authority (HFEA));[8] 67% against 18% for (HFEA);[9] 42% against 31% for (HFEA);[10] 45% against 42% for (HFEA);[11] 63% against 34% for (HFEA);[12] 47% against 46% for (BBC);[13] 64% against 36% for (BMJ).[14]

The range is anything from 45% to 90% opposition, but in none of the self-selecting polls discovered by this author was the level of support for hybrid embryos greater than the level of opposition. This does not necessarily reflect the opinions of the population as a whole, but it does indicate that there is a significant level of opposition seemingly greater than the number of enthusiastic supporters. This unscientific but consistent indication of feeling against hybrids was also reflected in the postbag that some MPs received on the Bill.[15]

There is then a significant level of opposition to hybrids, measured by open invitations to express opinion. Nevertheless, this does not tell us the views of most people, who do not spontaneously offer their opinions, but who must be asked. As noted above the STC report of March 2007 expressed dissatisfaction that there was little reliable evidence of public opinion on this question. The JCHTE in their report published in August 2007, were also ‘concerned by the unsubstantiated claims made about public opinion and public support and by the lack of evidence provided.’[4]

### **Mixed picture in representative sample polling**

The most detailed investigation of public opinion on this question to date, not reliant on self-selecting techniques, was conducted by the HFEA in July 2007 and reported in October 2007,[16] too late to be used by the STC or the JCHTE. The HFEA found, perhaps unsurprisingly, that it depends what question you ask. When asked whether human embryos should be used in scientific research, 56% agreed and 22% were opposed.[17] When asked about creating embryos for research, those in favour fell to 45% and those opposed rose to 30%.[18] These figures broadly agree with previous polling suggesting 68% in favour of embryo research and 41% in favour of creating embryos for research.[19] Nevertheless, when asked about creating hybrid embryos with a small amount of animal material purely for research 48% were opposed and only 35% supported such research.[20] At this point, then, it seemed that more people opposed creating hybrids than supported this, thus confirming the pattern seen in self-selecting polls. However the HFEA found that these figures change dramatically when specific

diseases (Parkinson's and Motor Neurone Disease) were named. In this case only 25% were opposed while 61% supported the research.[21]

This same pattern has been shown in subsequent representative sample opinion polls. Polls which did not specify named diseases found 60% opposition [22] or 67% opposition [23] to creating hybrids. However, in one poll where it was claimed that the research 'will help [scientists] understand diseases such as Parkinson's and Alzheimer's' opposition fell to 30% and support rose to 50%.[24]

The HFEA study is also confirmed by a more recent international survey. The BBVA Foundation promotes scientific research in social science, biomedicine and the environment. A study published by the foundation in May 2008 agreed very closely with the HFEA in relation to British public support for research on spare embryos (53% for 25% against) and creating embryos for research (44% for 34% against).[25] When people were asked to rank their acceptance of hybrid embryos from 0-10 (where 0 means totally unacceptable and 10 totally acceptable) the average was 4.2, showing an overall disapproval of hybrid embryos.[26] This agrees broadly with the first hybrid question in the HFEA poll.[20] The majority of countries polled also showed a similar or greater overall disapproval, with The United States, Germany and Japan showing higher levels of disapproval than Britain.[26]

On the whole, while it cannot be said that the British public oppose this research absolutely, neither can it be said that they strongly support it. There is a significant level of opposition to creating human-animal hybrids, measured not only by self-selecting polls (up to 90%),[5-14] but also by representative sample polls if the public is asked the question in general terms (up to 67%).[20, 22, 23, 26] This evidence vindicates the Department of Health Review which recognised 'considerable public unease with the possible creation of embryos combining human and animal material'.[27] It also answers the challenge of the JCHTE for 'serious evidence' that there is 'public resistance to making human nonhuman hybrids'.[28]

In two polls, a majority of the public (up to 61%)[21, 24] was persuaded that this research should take place. Nevertheless, this was only when it was claimed, implicitly or explicitly, that such research would in fact be useful for named diseases.

The HFEA acknowledge that 'the *potential* benefits of the research had a significant impact on opinion'[29] but take this merely as demonstrating the need for 'full and accurate information'. However it seems that the positive effect is only maintained if the public is not alerted to possible alternatives. For if alternatives are mentioned the opposition to hybrids re-emerges (up to 70%).[30] Government attempts to influence public opinion through 'full and accurate information' are not neutral. They select and present material to advocate a certain position. This is why people do not always trust government educational initiatives.

When polls do show majority public support for hybrid embryos, this is characteristically limited and is conditional on the likelihood of treatments for named diseases. In relation

to 'true hybrids' there were no claims of life-saving treatment and, unsurprisingly, there is no majority in favour. Even *after* a majority had expressed support for other kinds of human-animal hybrids, there were still more opposed than supported the creation of 'true hybrids'[31]. If scientists do not promise cures for named diseases then it seems that the public returns to its strong aversion to mixing human and nonhuman material.

### **Debated likelihood of treatments**

It is thus of great significance that even the STC Report, which was very strongly in favour of the research, acknowledged the existence of '**scientific debate about the potential usefulness of cytoplasmic hybrid embryos in research**'. [32] The Report argued that, despite disagreements, most scientists would not wish to prohibit the research: '**the scientific community as a whole is supportive of the work being licensable, even where there may be doubts about its likely success**'. [33] It should be noted that these claims about 'the scientific community as a whole' should be subject to the same scrutiny as is here applied to public opinion. What is the evidence for claims about the opinions of 'most scientists'? How representative are those who gave evidence? What the sources of error, accidental or deliberate, might distort the evidence? For example, how free do scientists feel to express reservations?

Furthermore, from the perspective of public opinion the '**doubts about its likely success**' cannot be side-stepped so easily. Support for creating cytoplasmic hybrids has only been expressed by a majority of people when they have been told of the hopes of the scientists to treat named diseases, [21, 24] and when they have not been alerted to debates within the scientific community about whether this research embodies a realistic likelihood of success nor whether there are viability of alternatives.

The British Prime Minister, Gordon Brown, who had so much influence in the Parliamentary debate, expressed his view that 'scientists are close to the breakthroughs that will allow embryonic stem cells to be used to treat a much wider range of conditions, especially those affecting the brain and nervous system... [Hybrid embryo research] can save and improve the lives of thousands and, over time, millions of people'. [34] Whether or not scientists have explicitly made such claims, the constant linking in the press of this research with named diseases has given the impression of imminent breakthroughs specifically through the creation of hybrid embryos.

In September 2005 Lord Winston cautioned about precisely these kinds of exaggerated claims, 'I was concerned that parliamentarians - particularly in the House of Commons - have been convinced that it was just a matter of a few years before we would be able to transplant stem cells and cure a lot of neurological disorders, like Alzheimer's disease, for which I think it is going to be a hugely difficult problem and *probably completely insoluble by stem cells*.' [35]

## **An issue unlike human embryo or animal research**

Those who favour creating human-animal hybrid embryos for research should not take for granted the support of the public. In terms of public opinion, this issue is importantly *unlike* human embryo research where, in the UK, a majority of the public expresses its support for embryo research in general terms (up to 68%),[17, 19, 25] as it does for research on animals (up to 70%).[36] In contrast, in the case of the creation of hybrid embryos a majority of the public expresses opposition (up to 67%) [20, 22, 23, 26] unless appeals are made concerning treatments for named diseases.[21, 24] Furthermore, the public continues to express opposition to the creation of ‘true hybrid’ embryos.[31]

Representative sample polling shows spontaneous opposition to hybrids. It can elicit conditional approval of the research but combined with continuing underlying unease. The summary given by the HFEA seems fair: ‘public opinion is very finely divided with people generally opposed to this research unless it is ... *likely to lead to ... medical advancements*.’[37] The claims made by Gordon Brown and others about the likelihood and imminence of medical breakthroughs through hybrid embryo research helped persuade the UK Parliament to back this research. However, these claims have raised expectations that will be hard to fulfill. If the promised breakthroughs are not forthcoming then the fragile public support for human-animal hybrids may yet revert to widespread opposition.

1 Hansard 19 May 2008: Column 28.

2 Baggin J. Now let the real battle begin *New Statesman* 22 May 2008:26.

3 House of Commons Science and Technology Committee Report: Fifth report of Session 2006–07, *Government proposals for the regulation of hybrid and chimera embryos* HC 272-I: para 113, emphasis in the original.

4 Report of the Joint Committee on the Human Tissue and Embryos (Draft) Bill Volume I, HL Paper 169-I and HC Paper 630-I: para 22.

5 Department of Health: Consultation on the Review of the Human Fertilisation and Embryology Act 2005, q. 61. (535 responses).

6 BBC online poll 5 January 2007: ‘Should the creation of hybrid embryos be allowed?’ (7689 votes cast).

7 See reference [4]: Appendix 6 paras 22, 28 (42 comments).

8 Human Fertilisation and Embryology Authority *A report on the findings of the consultation Hybrids and Chimeras* October 2007: Appendix D, question 2: individual (736 responses).

- 9 See reference [8]: Appendix D question 3: individual (736 responses).
- 10 See reference [8]: Appendix D question 2: organisation (74 responses).
- 11 See reference [8]: Appendix D question 3: organisation (74 responses).
- 12 See reference [8]: Appendix G: Question: ‘Do the potential benefits outweigh any ethical concerns?’ (153 participants).
- 13 BBC online Poll 5 September 2007: ‘Should hybrid embryos be used for research?’ (19818 votes cast).
- 14 BMJ Online Poll 28 May 2008: ‘MPs [were] right to allow the creation of ‘admixed’ human and animal embryos for research in the United Kingdom’ (747 votes cast).
- 15 Hansard 19 May 2008: Column 65; Hansard 12 May 2008: Column 1098.
- 16 See reference [8]: Appendix F.
- 17 See reference [8]: Appendix F: para 7.
- 18 See reference [8]: Appendix F: para 9.
- 19 YouGov, 2005 for the Daily Telegraph, cf. See reference [8]: Appendix F: footnotes 3,4.
- 20 See reference [8]: Appendix F: para 11.
- 21 See reference [8]: Appendix F: para 13.
- 22 ComRes 31 March 2008.
- 23 ORB 3 April 2008.
- 24 Populus 10 April 2008 for The Times.
- 25 Second BBVA Foundation International Study on Biotechnology: Attitudes to Stem Ce5l Research and Hybrid Embryos May 2008: 21.
- 26 See reference [25]: 28.
- 27 Department of Health Review of the Human Fertilisation and Embryology Act: Proposals for revised legislation (including establishment of the Regulatory Authority for Tissue and Embryos): Cm 6989, December 2006: para 2.83.
- 28 See reference [4]: paras 15, 14.

29 See reference [8]: 5.11, emphasis in the original.

30 ComRes 12 May 2008.

31 See reference [16]: Appendix F: para 18.

32 See reference [3]: para 57 bold in the original.

33 See reference [3]: para 58 bold in the original.

34 Brown G. Why I believe stem cell researchers deserve our backing *Observer: Comment* (May 18 2008):31.

35 Amos J. Winston warns of stem cell ‘hype’ *BBC Online* 5 September 2005 (emphasis added).

36 MORI 2005.

37 See reference [16]: 7.2 emphasis added.